

General

Guideline Title

Follow-up of colorectal polyps or cancer.

Bibliographic Source(s)

Guidelines and Protocols Advisory Committee. Follow-up of colorectal polyps or cancer. Victoria (BC): British Columbia Medical Association; 2013 Jan 16. 5 p. [14 references]

Guideline Status

This is the current release of the guideline.

Recommendations

Major Recommendations

Post- Polypectomy

The majority of colorectal cancers (CRCs) arise from adenomas, the 'adenoma–carcinoma sequence'. Two major types of polyps are found in the colon and rectum: adenomas and hyperplastic polyps. Hyperplastic polyps are considered to have no malignant potential.

Table: Post-Colorectal Polypectomy Surveillance Recommendations (Brooks et al., 2008)

Risk Group	Surveillance Recommendations
Patients with hyperplastic polyps	Follow-up as average risk.* See the National Guideline Clearinghouse summary of the Medical Services Commission, British Columbia guideline Colorectal screening for cancer prevention in asymptomatic patients .
Patients with 1 or 2 small (<1 cm) tubular adenomas with only low-grade dysplasia	Follow-up colonoscopy in 5 to 10 years. Timing within this interval should be based on other clinical factors (e.g., previous colonoscopy findings, family history, patient preferences, judgment of the physician).
Patients with 1 or more sessile serrated polyps <1 cm with no dysplasia	Follow-up colonoscopy in 5 years.
Patients with 3 to 10 tubular adenomas or any advanced adenomas	Follow-up colonoscopy in 3 years provided that adenomas are

<p>(tubular adenomas ≥ 1 cm, villous adenomas, adenoma with high-grade dysplasia (HGD), sessile serrated polyps ≥ 1 cm, sessile serrated polyps with dysplasia, or traditional serrated adenoma)</p> <p>Patients with sessile adenomas where complete removal is uncertain</p>	<p>completely removed. If the follow-up colonoscopy is normal or shows only 1 or 2 small (<1 cm) tubular adenomas with low-grade dysplasia, the interval for the subsequent examination should be 5 years.</p> <p>Follow-up colonoscopy within 6 months to verify complete removal. Once complete removal has been established, subsequent surveillance should be as for advanced adenomas.</p>
<p>Patients suspected of having a hereditary colorectal cancer syndrome</p>	<p>When the family history indicates hereditary non-polyposis colon cancer (HNPCC) and familial adenomatous polyposis (FAP), colonoscopy every 1 to 2 years.**</p>

*Fecal occult blood test (FOBT) is an appropriate follow-up modality for this group. FOBT should not be used until 10 years after the last colonoscopy for the hyperplastic polyp patient. All other risk groups above should not be followed with FOBT.

**Individuals with HNPCC or FAP should be referred to the Hereditary Cancer Program at the BC Cancer Agency for assessment, counseling and if appropriate, genetic testing.

Post-Cancer Resection

The goal of follow-up after resection is to identify recurrent disease or metastases and to detect subsequent adenomas. These recommendations are generally expert consensus-based. Patients with significant co-morbidities, very advanced age or limited 5 year life expectancy are not routinely offered surveillance.

Follow-up Visits with Family Physician

Focused history and physical examination are recommended every 3 to 6 months for 2 years, and then every 6 months for a total of 5 years (Desch et al, 2005; National Comprehensive Cancer Network [NCCN], 2012). It is recommended that each follow-up visit include:

- History to elicit gastrointestinal and constitutional symptoms, including nutritional status.
- Physical examination with particular attention to the abdomen, liver and rectal evaluation (or perineal inspection and palpation in those patients who have had an abdominal perineal resection).
- Routine laboratory investigations, such as liver chemistry, in the absence of symptoms are not useful.

Controversies in Care

Aspirin (and other nonsteroidal anti-inflammatory drugs [NSAIDs]) has been shown to reduce the incidence of subsequent colorectal adenomas and cancer, but because of potential adverse effects it is currently not recommended (Din et al., 2010).

Tumour Markers

A carcinoembryonic antigen (CEA) test is recommended at diagnosis of CRC and repeated to monitor rising levels of CEA (at least doubling) which can indicate hepatic or pulmonary metastases. Eligible patients for surveillance with CEA are those with stage II or III tumors (i.e., tumour through the bowel wall or metastatic to locoregional lymph nodes). These patients are offered CEA every 3 months for the first 3 years and every 6 months during years 4 and 5. No CEA is required beyond 5 years.

Imaging and X-Rays

Liver imaging, by ultrasound or computed tomography (CT) scan (CT preferable) (Kinkel et al., 2002; Miles & Burkill, 2007), is recommended every 6 months for the first 3 years, then once per year for 2 more years (Figueredo et al., 2003). For those with advanced stage cancers or undergoing chemotherapy, follow the recommendations of the oncologist (Desch et al., 2005; Pfister, Benson, & Somerfield, 2004). Routine CT scanning is not recommended beyond 5 years.

There is little evidence to show a survival benefit for routine chest x-ray for post CRC resection patients (Gan, Wilson, & Hollington, 2007). A chest CT scan is recommended for every 12 months for the first 3 years in cases of advanced cancer or rectal cancer (Desch et al., 2005; NCCN, 2012).

Colonoscopy

Patients with CRC should undergo a complete cancer and polyp clearing colonoscopy prior to or within 12 months of surgical resection of the colorectal tumour. A colonoscopy should follow at one year after resection or clearing colonoscopy (Brooks et al., 2008; NCCN, 2012). If the

one year colonoscopy is normal, the next colonoscopy should be performed in 3 years; if those results are normal, the next colonoscopy should be performed in 5 years (Brooks et al., 2008; NCCN, 2012) to look for another primary colorectal malignancy or adenomatous polyps. After the one year colonoscopy, the intervals between subsequent colonoscopies may be shortened if there is evidence of hereditary non-polyposis colon cancer (HNPCC) or if adenoma findings warrant earlier colonoscopy.

Performance of fecal occult blood test (FOBT) is unnecessary in patients undergoing colonoscopic surveillance (Winawer et al., 2006).

Surveillance after 5 Years

Continued surveillance is recommended with a colonoscopy conducted every 5 years. There is no place for FOBT in this population.

Clinical Algorithm(s)

None provided

Scope

Disease/Condition(s)

- Colorectal polyps (adenomas and hyperplastic polyps)
- Colorectal cancer (CRC)

Guideline Category

Diagnosis

Evaluation

Prevention

Risk Assessment

Clinical Specialty

Colon and Rectal Surgery

Family Practice

Gastroenterology

Internal Medicine

Oncology

Pathology

Radiology

Intended Users

Advanced Practice Nurses

Health Plans

Managed Care Organizations

Nurses

Physician Assistants

Physicians

Guideline Objective(s)

To provide follow-up recommendations for patients after curative resection of colorectal cancer (CRC) or polypectomy

Target Population

Patients who have undergone curative resection of colorectal cancer (CRC) or polypectomy

Note: These recommendations do not apply to patients with familial adenomatous polyposis (FAP), hereditary non-polyposis colon cancer (HNPCC) or inflammatory bowel disease. Recommendations for these patients and for the detection of colorectal neoplasms in asymptomatic patients are found in the National Guideline Clearinghouse (NGC) summary of the Medical Services Commission, British Columbia guideline [Colorectal screening for cancer prevention in asymptomatic patients](#).

Interventions and Practices Considered

1. Post-polypectomy surveillance
 - Fecal occult blood test (FOBT) for hyperplastic polyps
 - Follow-up colonoscopy for adenomas, with surveillance intervals based on risk and other clinical factors
2. Post-cancer resection follow-up
 - Follow-up visits with family physician (history, physical examination, routine laboratory investigations) (not currently recommended)
 - Carcinoembryonic antigen (CEA) testing
 - Liver imaging by ultrasound or computed tomography (CT) scan
 - Chest x-ray
 - Colonoscopy with complete cancer and polyp clearing
 - FOBT (not recommended in this population)
 - Continued surveillance every 5 years

Note: Aspirin and other nonsteroidal anti-inflammatory drugs (NSAIDs) and FOBT are not recommended for post-cancer resection follow-up.

Major Outcomes Considered

- Risk of colorectal cancer (CRC) development and mortality
- CRC recurrence rate
- Sensitivity and specificity of diagnostic studies
- Effectiveness of surveillance testing

Methodology

Methods Used to Collect/Select the Evidence

Hand-searches of Published Literature (Primary Sources)

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

Systematic Literature Review

Evidence was obtained through a systematic review of peer-reviewed literature (up to May 2012) using the databases MEDLINE, PubMed, EBSCO, Ovid, and the Cochrane Collaboration's Database for Systematic Reviews. The searches also included: Canadian Agency for Drugs and Technologies in Health (CADTH), Cumulative Index to Nursing and Allied Health Literature (CINAHL), Therapeutics Initiative, Cochrane reviews, BMJ Clinical Evidence, e-Therapeutics (Compendium of Pharmaceuticals and Specialties), Agency for Healthcare Research and Quality (AHRQ), and US Food and Drug Administration (FDA). Clinical practice guidelines from other jurisdictions for colorectal cancer follow-up and surveillance were also reviewed (up to January 2013).

Search Terms

Search terms included: colon tumor/ colon cancer/ colon adenocarcinoma/ colon carcinoma/ colorectal carcinoma/ colorectal tumor/ sigmoid carcinoma/ rectum cancer/ rectum tumor/ rectum carcinoma/ rectum adenoma/ colorectal cancer/ randomization/ randomized controlled trial/ double blind procedure/ single blind procedure/ metastasis/ cancer recurrence/ tumor recurrence/ recurrent disease/ (recur\$ or metastas:).ti,ab. / longitudinal study/ (follow-up or follow up).ti,ab. / follow up/ prospective study/ treatment outcome/ cancer survival/ quality of life/ prognosis/ mortality/ morbidity/ exp survival/

Exclusion Criteria

Exclusion criteria were study limitations, inconsistency of results, indirectness of evidence, reporting bias, duplicate evidence and incomparable populations.

Number of Source Documents

Not stated

Methods Used to Assess the Quality and Strength of the Evidence

Not stated

Rating Scheme for the Strength of the Evidence

Not applicable

Methods Used to Analyze the Evidence

Systematic Review

Description of the Methods Used to Analyze the Evidence

The evidence review process used in the development of these guidelines is conducted with reference to the Oxford Centre for Evidence-Based Medicine (CEBM) levels of evidence (March 2009) (www.cebm.net).

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

The working group reviewed available systematic reviews and based recommendations upon them. In cases where systematic reviews are not available, recommendations are based on primary evidence searches including individual randomized controlled trials.

The working group reviewed the evidence available at the time of writing (January 2011–May 2012) and, through consensus, distilled this evidence into a usable document for family physicians. The primary evidence used is listed in the reference section of the guideline.

Rating Scheme for the Strength of the Recommendations

Not applicable

Cost Analysis

A formal cost analysis was not performed and published cost analyses were not reviewed.

Method of Guideline Validation

External Peer Review

Internal Peer Review

Description of Method of Guideline Validation

This guideline was approved by the British Columbia Medical Association and adopted by the Medical Services Commission.

Evidence Supporting the Recommendations

References Supporting the Recommendations

Brooks DD, Winawer SJ, Rex DK, Zauber AG, Kahi CJ, Smith RA, Levin B, Wender R, U.S. Multi-Society Task Force on Colorectal Cancer, American Cancer Society. Colonoscopy surveillance after polypectomy and colorectal cancer resection. *Am Fam Physician*. 2008 Apr 1;77(7):995-1002. [PubMed](#)

Desch CE, Benson AB 3rd, Somerfield MR, Flynn PJ, Krause C, Loprinzi CL, Minsky BD, Pfister DG, Virgo KS, Petrelli NJ. Colorectal cancer surveillance: 2005 update of an American Society of Clinical Oncology practice guideline. *J Clin Oncol*. 2005 Nov 20;23(33):8512-9. [35 references] [PubMed](#)

Din FV, Theodoratou E, Farrington SM, Tenesa A, Barnetson RA, Cetnarskyj R, Stark L, Porteous ME, Campbell H, Dunlop MG. Effect of aspirin and NSAIDs on risk and survival from colorectal cancer. *Gut*. 2010 Dec;59(12):1670-9. [PubMed](#)

Figueredo A, Rumble RB, Maroun J, Earle CC, Cummings B, McLeod R, Zuraw L, Zwaal C. Follow-up of patients with curatively resected colorectal cancer: a practice guideline. *BMC Cancer*. 2003 Oct 6;3(1):26. [62 references] [PubMed](#)

Gan S, Wilson K, Hollington P. Surveillance of patients following surgery with curative intent for colorectal cancer. *World J Gastroenterol*. 2007 Jul 28;13(28):3816-23. [113 references] [PubMed](#)

Kinkel K, Lu Y, Both M, Warren RS, Thoeni RF. Detection of hepatic metastases from cancers of the gastrointestinal tract by using noninvasive imaging methods (US, CT, MR imaging, PET): a meta-analysis. *Radiology*. 2002 Sep;224(3):748-56. [PubMed](#)

Miles K, Burkill G. Colorectal cancer: imaging surveillance following resection of primary tumour. *Cancer Imaging*. 2007;7(Spec No A):S143-9. [PubMed](#)

National Comprehensive Cancer Network (NCCN). NCCN guidelines version 3.2012: colon cancer. [internet]. Fort Washington (PA): National Comprehensive Cancer Network (NCCN); 2012 Jan 17 [accessed 2012 Apr 13].

Pfister DG, Benson AB 3rd, Somerfield MR. Clinical practice. Surveillance strategies after curative treatment of colorectal cancer. *N Engl J Med*. 2004 Jun 3;350(23):2375-82. [50 references] [PubMed](#)

Winawer SJ, Zauber AG, Fletcher RH, Stillman JS, O'Brien MJ, Levin B, Smith RA, Lieberman DA, Burt RW, Levin TR, Bond JH, Brooks D, Byers T, Hyman N, Kirk L, Thorson A, Simmang C, Johnson D, Rex DK. Guidelines for colonoscopy surveillance after polypectomy: a consensus update by the US Multi-Society Task Force on Colorectal Cancer and the American Cancer Society. *CA Cancer J Clin*. 2006 May-Jun;56(3):143-59. [83 references] [PubMed](#)

Type of Evidence Supporting the Recommendations

This is an evidence-based clinical guideline for general practitioners including consensus statements when evidence is not available. The type of supporting evidence is not specifically stated for each recommendation.

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

- Appropriate follow-up care for colorectal polyps or cancer
- Prevention of additional colorectal cancer (CRC)

Potential Harms

Not stated

Qualifying Statements

Qualifying Statements

The Clinical Practice Guidelines (the "Guidelines") have been developed by the Guidelines and Protocols Advisory Committee on behalf of the Medical Services Commission. The Guidelines are intended to give an understanding of a clinical problem, and outline one or more preferred approaches to the investigation and management of the problem. The Guidelines are not intended as a substitute for the advice or professional judgment of a health care professional, nor are they intended to be the only approach to the management of clinical problem.

Implementation of the Guideline

Description of Implementation Strategy

An implementation strategy was not provided.

Implementation Tools

Patient Resources

Quick Reference Guides/Physician Guides

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Living with Illness

Staying Healthy

IOM Domain

Effectiveness

Patient-centeredness

Identifying Information and Availability

Bibliographic Source(s)

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Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

2013 Jan 16

Guideline Developer(s)

Medical Services Commission, British Columbia - State/Local Government Agency [Non-U.S.]

Source(s) of Funding

Medical Services Commission, British Columbia

Guideline Committee

Guidelines and Protocols Advisory Committee, Colorectal Cancer Working Group

Composition of Group That Authored the Guideline

The working group consisted of three gastroenterologists, a general surgeon, a radiologist, a pathologist, and a general practitioner.

Financial Disclosures/Conflicts of Interest

Any person participating as member of a Guidelines and Protocols Advisory Committee (GPAC) Working Group is required to complete a conflict of interest declaration.

Guideline Status

This is the current release of the guideline.

Guideline Availability

Electronic copies: Available from the [British Columbia Ministry of Health Web site](#) .

Availability of Companion Documents

The following is available:

- Follow-up of colorectal polyps or cancer. Summary. Victoria (BC): British Columbia Medical Services Commission; 2013. 2 p. Electronic copies: Available in Portable Document Format (PDF) from the [British Columbia Ministry of Health Web site](#) .

Patient Resources

The following is available:

- Follow-up program after colorectal cancer treatments. Patient guide. Victoria (BC): British Columbia Medical Services Commission. 2 p. Electronic copies: Available in Portable Document Format (PDF) from the [British Columbia Ministry of Health Web site](#) .

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NGC Status

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